

CLAIMS

1. A pneumatic tire including a pair of right and left bead cores, and a carcass toroidally straddling the bead cores, said pneumatic tire comprising:

a tread rubber which forms a tread section, the tread rubber being disposed on the outer side of the carcass in a radial direction of the tire;

a side rubber which forms a portion of each shoulder section, the side rubber being attached to each outer end portion of the tread rubber in a widthwise direction of the tire; and

a side wall rubber which forms each side wall section and a portion of each shoulder section, physical properties or composition of the side wall rubber being the same as or similar to physical properties or composition of the side rubber, each side wall rubber being disposed on the outer side of the carcass in the widthwise direction of the tire, and each outer end portion of the side wall rubber in the radial direction of the tire being attached to each outer end portion of the side rubber in the widthwise direction of the tire.

2. A pneumatic tire according to claim 1, wherein the tread rubber and the side rubber are integrally extruded in an unvulcanized state by an extruder.

3. A production method of the pneumatic tire according to claim 1, said method comprising:

a tire-case-molding process in which a carcass is wound around a rotary drum capable of expanding its diameter, and a bead section forming member is attached to the carcass, so as to mold a case; and

a tire-contour-molding process in which the tread rubber in an unvulcanized state, to each outer end portion thereof in a widthwise direction of the tire the side rubber in an unvulcanized state has been attached, is attached on the outer side, in a radial direction of the tire, of the carcass which forms the case, the side wall rubber in an unvulcanized state is attached to each of side portions of the carcass, which side portions are outer portions of the carcass in the widthwise direction of the tire, and each outer end portion of the side wall rubber in the radial direction of the tire is attached to each outer end portion of the side rubber in the widthwise direction of the tire, so as to mold a contour of the tire.

4. A production method of the pneumatic tire according to claim 1, said method comprising:

a tire-case-molding process in which a carcass is wound around a rotary drum capable of expanding its diameter, a bead section forming member is attached to the carcass, attachment preventing sheets are respectively stuck on portions of the carcass, on each of which portions of the carcass the outer end portion, in a radial direction of the tire, of the side wall rubber to be attached to the

carcass and the bead section forming member is positioned, and the side wall rubber in an unvulcanized state is attached to the carcass and the bead section forming member such that each outer end portion of the side wall rubber in the radial direction of the tire is positioned on the corresponding attachment preventing sheet, so as to mold a case; and

a tire-contour-molding process in which each outer end portion of the side wall rubber in the radial direction of the tire is pulled up outwardly, the tread rubber in an unvulcanized state, to each outer end portion thereof in a widthwise direction of the tire the side rubber in an unvulcanized state has been attached, is attached on the outer side of the carcass in the radial direction of the tire, and each outer end portion of the side wall rubber in the radial direction of the tire is attached to the corresponding outer end portion of the side rubber in the widthwise direction of the tire, so as to mold a contour of the tire.

5. A production method of the pneumatic tire, according to claim 3 or 4, wherein the tread rubber and the side rubber are integrally extruded in an unvulcanized state by an extruder.